ENVIRONMENTAL CHEMISTS

Date of Report: June 3, 1997 Date Received: May 29, 1997

Project: Metro Self Monitor, PO #M57339 Date Samples Extracted: May 29, 1997 Date Extracts Analyzed: June 2, 1997

RESULTS FROM THE ANALYSIS OF THE PROCESS WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	Chromium	<u>Copper</u>	Nickel Zinc
M57339	0.73	0.61	0.83 0.06
Method Blank	<0.05	<0.05	<0.05 <0.05

ENVIRONMENTAL CHEMISTS

Date of Report: June 3, 1997 Date Received: May 29, 1997

Project: Metro Self Monitor, PO #M57339

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 78288 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicat Result	Relative e Percent Difference	Acceptance <u>Criteria</u>
Chromium	n mg/L (ppm)	0.42	0.43	2	0-20
Copper	mg/L (ppm)	0.44	0.43	2	0-20
Nickel	mg/L (ppm)	0.71	0.57	22h	0-20
Zinc	mg/L (ppm)	0.06	0.05	18	0-20

Laboratory Code: 78288 (Matrix Spike)

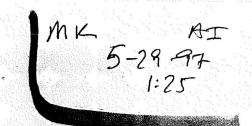
	Reporting	Spike			Recovery	Acceptance	Percent		
Analyte:	Units	<u>Level</u>	Result	MS	MSD	Criteria	Differen	<u>ce</u>	
Chromium	mg/L (ppm)	5	0.42	89	91	80-120	2		
Copper	mg/L (ppm)	5	0.44	81	82	80-120	1		
Nickel	mg/L (ppm)	10	0.71	91	90	80-120	1	·	
Zinc	mg/L (ppm)	5	0.06	93	94	80-120	1	· X::	

Laboratory Code: Spike Blank

	Reporting	Spike		Recovery	Acceptance		
Analyte:	Units	Level	MS	MSD	<u>Criteria</u>	Difference	
Chromium	mg/L (ppm)	5	98	97	80-120	1	
Copper	mg/L (ppm)	5	95	92	80-120	3	
Nickel	mg/L (ppm)	10	102	101	80-120	1	
Zinc	mg/L (ppm)	5	102	101	80-120	1	

h-The RPD results are outside of the acceptance criteria established for this analysis. The sample contained suspended particulates. The variability present can be attributed to this sample type.

D. BRUYA, INC.



SAMPLE CHAIN OF CUSTODY

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth Albertson, M.S. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. Melanie Kirol, B.S. June 3, 1997 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

INVOICE # 97ACU0603-2 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO #M57339: Results of testing requested by Gerry Thompson, Project Manager for material submitted on May 29, 1997.

FEDERAL TAX ID #(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Beth Albertson, M.S. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. Melanie Kirol, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

June 3, 1997

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on May 29, 1997 from your Metro Self Monitor, PO #M57339 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

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